

**CLAIMS:**

1. A method for assembling an imaging system comprising the acts of:  
assembling a detector, the detector being adapted to fit within a housing, and  
the detector having an array of pixels forming rows and columns, each pixel having  
radiation detection circuitry for providing a signal from radiation received;

sealing the detector after assembling the detector;

assembling the detector within a housing, the housing being adapted to  
provide a unified structure, the housing comprising a mounting base and an outer  
cover; and

sealing the housing.

2. The method as in claim 1, wherein the act of assembling the detector  
comprises the acts of:

coating a glass substrate with silicon oxide in a vapor deposition chamber;

depositing photodiodes on a glass substrate;

depositing conductive readout lines, the readout lines capable of reading out  
data; and

depositing a film of cesium iodide on the glass substrate.

3. The method as in claim 1, wherein the act of sealing the detector  
comprises coating the detector with parylene.

4. The method as in claim 1, wherein the act of sealing the housing  
comprises the act of coating the housing with parylene.

5. The method as in claim 2, wherein the readout lines are masked  
during the act of sealing the detector.

6. A sealed detector for an imaging system comprising:  
a detector including, an array of pixels forming rows and columns,  
each pixel having radiation detection circuitry for providing a signal from  
radiation received;
- 5 a housing assembly, the assembly being configured to receive the detector  
and having a body with a recess and a plurality of elements fitted within the recess;  
and  
a protective layer surrounding exterior portions of the housing assembly.
- 10 7. The detector as in claim 6, wherein the protective layer is a parylene  
coating.
8. The detector as in claim 6, wherein the detector includes a detector  
assembly comprising:
- 15 a glass substrate having a silicon oxide coating;  
a plurality of photodiodes deposited on the glass substrate;  
conductive readout lines configured to reading out data from the plurality of  
photodiodes; and  
a film of cesium iodide on the glass substrate.
- 20 9. The detector as in claim 6, wherein a coating surrounding exterior  
portions of the detector is applied.
10. The detector as in claim 6, wherein the detector includes readout  
conductors extending from the housing assembly.
- 25 11. The detector as in claim 6, wherein the housing assembly includes a  
body adapted to receive the detector assembly and a cover.
- 30 12. A digital imaging system, comprising:  
a source of radiation;  
a control circuit to regulate the source of radiation; and

a detector for receiving radiation from the source of radiation and generating signals therefrom, the detector having an array of pixels forming rows and columns, and a protective layer, the protective layer being coated on the surface of the detector.

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13. The system as in claim 12, wherein the protective layer on the detector includes a parylene coating.

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14. The system as in claim 12, wherein the detector is adapted into a housing.

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15. The system as in claim 14, wherein the housing comprises:  
a mounting base, having peripheral walls; and  
a cold plate adapted to cover the mounting base, and configured to fasten to the mounting base creating a recess, and the detector being adaptable into the recess.

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16. The system as in claim 15, wherein the housing is coated with a protective layer of parylene.

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17. An sealed imaging system detector comprising:  
means for detecting radiation including an array of pixels forming rows and columns;  
means for housing the means for detecting; and  
means for sealing the means for housing.

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18. The imaging system detector as in claim 17, wherein the means for housing comprises means for receiving a panel assembly into a housing.

19. The imaging system detector as in claim 17, wherein the means for housing includes means for fastening the means for detecting to the means for housing.

20. The imaging system detector as in claim 17, wherein means for housing includes a plurality of elements for adapting a housing to a detector.

21. The imaging system detector as in claim 17, wherein the means for  
5 sealing comprises means for coating the means for detecting.

22. The imaging system detector as in claim 17, wherein the means for sealing comprises a parylene layer disposed over the means for housing.

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